



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/686,196	10/15/2003	Gregory A. Shteyngarts	16-471	5909

7590

01/31/2006

WATTS, HOFFMANN CO., L.P.A.
Ste. 1750
1100 Superior Ave.
Cleveland, OH 44114

EXAMINER

ALIE, GHASSEM

ART UNIT PAPER NUMBER

3724

DATE MAILED: 01/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/686,196

Applicant(s)

SHTEYNGARTS, GREGORY A.

Examiner

Ghassem Alie

Art Unit

3724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 December 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) 9-25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

1. This is in response to the RCE filled on 12/19/05. Claims 1-26 are pending in which claims 9-25 are withdrawn. It should be noted that in response to the restriction requirement mailed on 04/14/05, Group I (Claims 1-8 and 26) was elected on 06/23/05.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 26 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Regarding claim 26, "a die location pilot connected to the die board that engages a registration feature on the sheet of thermoformable plastic that is associated with the plastic article and separate from the plastic article" is confusing. It is not clear what is called "a registration feature" in the instant application. If the registration feature is located of the sheet of thermofromable plastic, the registration feature would be the plastic article 53 as shown in Fig. 4. The plastic article 53 is positioned on the sheet of thermofromable plastic 11 and is associated with the conical surface 40 of the stopper 18b. However, it is not clear how the registration feature which is the plastic article 53 is associated with itself and also separated from itself. See Fig. 4 and claim 26.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Forthmann (4,823,660) in view of Obara (JP405154795A) or Barrett (4,700,481), and in further view of Brown (4,559,800). Regarding claim 1, Forthmann teaches a trim press including a die building up plate 40 that is mounted to the first platen 42 and a striker plate 16 that is mounted to a second platen 12. Forthmann also teaches that the trim press moves one of the first or second platens such that the trim press travels between a load position in which a cutting edge 32 is spaced from the striker plate 16 and a cutting position in which the cutting edge 32 confronts the striker plate 16. Forthmann also teaches a die 30 for cutting a thermoformed plastic article from a sheet 2 of thermoformable plastic. Forthmann also teaches that the die includes a knife element 30 connected to the die build up plate 40 that has a cutting edge 32 for serving the thermoformable plastic sheet when the knife element 30 confronts the striker plate 16. Forthmann also teaches a heater 170 in contact with knife element 30 for heating the knife element. The heater heats a substantial portion of perimeter of the knife. See Figs. 1-3 and 4-8 and col. 3, lines 30-68 and col. 4, lines 1-68 in Forthmann.

Forthmann does not teach that the heater is band heater adhered to the knife element. However, the use of a heater that is connected to the knife is well known in the art such as taught by Obara or Barrett. Obara teaches that a heater 8 is adhered to a knife element. The heater 8 is attached to the knife element 7. See Figs. 1-2 and translated abstract in Obara. Barrett also teaches a heater 30 is connected to a knife element 36. See Figs. 2 and 3 in Barrett. It would have been obvious to a person of ordinary skill in the art to provide

Forthemann's trim press apparatus with a heating element that is connected to the knife element, as taught by Obara or Barrett, in order heat up the knife in shorter period of time.

The attachment of the heater to the knife element in Obara is considered to be the same as adhering the heater to the knife element, since the heater is tightly connected to the knife element. In addition, the use of heating band that is adhered to a heat conductive material is well known in the art such as taught by Brawn. Brawn teaches a heater bond 50 adhered to a substantial portion of the perimeter of a heat conductive element 40. See Figs. 1-3 and col. 4, lines 31-46 and col. 5, lines 15-26 in Brown. It would have been obvious to a person of ordinary skill in the art to provide Forthemann's trim press apparatus, as modified by Obara or Barrett, with a heating element that is adhere to the conductive member, as taught by Brown, in order to provide the knife with a the heater that can be easily configured to the shaped of the knife and a heater that has a negligible weight which does not impede the normal operation of the knife.

6. Claims 1 and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by Harcuba et al. (4,051,754), hereinafter Harcuba, in view of Obara or Barrett and in further view of Brown. Regarding claim 1, Harcuba teaches a trim press including a die building up plate 14 that is mounted to a first platen 4 and a striker plate 6 that is inherently mounted to second platen. The pate 6 inherently is supported or mounted to a surface or a platen that is considered to be a second platen. Harcuba also teaches that the trim press moves one of the first or second platens such that the trim press travels between a load position in which a cutting edge is spaced from the striker plate 6 and a cutting position in which the cutting edge confronts the striker plate 6. Harcuba also teaches a die capable of cutting a thermoformed

plastic article from a sheet of thermoformable plastic. Harcuba also teaches that the die includes a knife element 2, 3 connected to the die build up plate 1 that has a cutting edge for serving the thermoformable plastic sheet when the knife element 2, 3 confronts the striker plate 6. Harcuba also teaches a heater 1, 7 in contact with knife element 2, 3 for heating the knife element. Heater 7 and plate 1 define a heating element, since these two components are heated and the heat is transferred to knife 2, 3 through these components. In addition, the heater 7 and the plate 1 form a heating element that heats up the knife. See Figs. 1-2 and col. 1, lines 56-68 and col. 2, lines 1-65 in Harcuba.

Harcuba does not teach that the heater is band heater adhered to the knife element. However, the use of a heater that is connected to the knife is well known in the art such as taught by Obara or Barrett. Obara teaches that a heater 8 is adhered to a knife element. The heater 8 is attached to the knife element 7. See Figs. 1-2 and translated abstract in Obara. Barrett also teaches a heater 30 is connected to a knife element 36. See Figs. 2 and 3 in Barrett. It would have been obvious to a person of ordinary skill in the art to provide Harcuba's trim press apparatus with a heating element that is connected to the knife element, as taught by Obara or Barrett, in order heat up the knife in shorter period of time.

The attachment of the heater to the knife element in Obara is considered to be the same as adhering the heater to the knife element, since the heater is tightly connected to the knife element. In addition, the use of heating band that is adhered to a heat conductive material is well known in the art such as taught by Brawn. Brawn teaches a heater bond 50 adhered to a substantial portion of the perimeter of a heat conductive element 40. See Figs. 1-3 and col. 4, lines 31-46 and col. 5, lines 15-26 in Brown. It would have been obvious to a person of

ordinary skill in the art to provide Harcuba's trim press apparatus, as modified by Obara or Barrett, with a heating element that is adhere to the conductive member, as taught by Brown, in order to provide the knife with a the heater that can be easily configured to the shaped of the knife and a heater that has a negligible weight which does not impede the normal operation of the knife.

Regarding claim 3, Harcuba teaches everything noted above including a thermocouple 17 for measuring a temperature of the knife element and a temperature control module for controlling the heater based on the measured temperature to maintain the knife element 2, 3 within a range of desired temperature. See Fig. 1 and col. 2, lines 11-25. The thermostat 17 functions the same as the thermocouple and measures and regulates the temperature between the blade and the heater 7. In addition, the use of thermocouple for measuring the temperature of the blade and a temperature control module for controlling the temperature of the heater and the knife element is well known in the art such as taught by Smith et al. (5,451,288), hereinafter Smith. Smith teaches a thermocouple 14 connected to a knife element 25, 26 and a temperature control module 85. See Figs. 1-8 and col. 9, lines 47-65 in Smith. Brown also teaches that a thermocouple-controlled power source may be for controlling the temperature of the heater band. See col. 5, lines 15-26.

7. Claims 1, 4, and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Joep et al. (3,640,666), hereinafter Joep, in view of Obara or Barrett and in further view of Brown. Regarding claim 1, Joep teaches a trim press 10 including a die building up plate 32 that is mounted to a first platen 36 and a striker plate that is mounted to a second platen 12. The plate with molding 13 attached to the plate 12 defines the striker plat. Joep also teaches that

the trim press moves one of the first or second platens such that the trim press travels between a load position in which a cutting edge is spaced from the striker plate and a cutting position in which the cutting edge confronts the striker plate. Jope also teaches a die for cutting a thermoformed plastic article from a sheet 11 of thermoformable plastic. Jope also teaches that the die includes a knife element 16 connected to the die build up plate 32 that has a cutting edge for serving the thermoformable plastic sheet when the knife element 16 confronts the striker plate. Jope also teaches a heater element 34 that is in direct contact with knife element 16 for heating the knife element. Knife 16 is mounted to the heater element 34 via the baffle plate 32 which is in direct contact with the heating element 34. The baffle plate is considered to be part of the knife assembly. It should also be noted that entire plate 34 is called "heated plate means." See Figs. 1-5 and col. 3, lines 31-75 and col. 4, lines 1-72 in Jope.

Jope does not teach that the heater is band heater adhered to the knife element. However, the use of a heater that is connected to the knife is well known in the art such as taught by Obara or Barrett. Obara teaches that a heater 8 is adhered to a knife element. The heater 8 is attached to side of the knife element 7. See Figs. 1-2 and translated abstract in Obara. Barrett also teaches a heater 30 is connected to a knife element 36. See Figs. 2 and 3 in Barrett. It would have been obvious to a person of ordinary skill in the art to provide Harcuba's trim press apparatus with a heating element that is connected to the side of the knife element, as taught by Obara or Barrett, in order heat up the knife in shorter period of time.

The attachment of the heater to the knife element in Obara is considered to be the same as adhering the heater to the knife element, since the heater is tightly connected to the knife element. In addition, the use of heating band that is adhered to a heat conductive material is well known in the art such as taught by Brawn. Brawn teaches a heater bond 50 adhered to a substantial portion of the perimeter of a heat conductive element 40. See Figs. 1-3 and col. 4, lines 31-46 and col. 5, lines 15-26 in Brown. It would have been obvious to a person of ordinary skill in the art to provide Jobe's trim press apparatus, as modified by Obara, with a heating element that is adhere to the conductive member, as taught by Brown, in order to provide the knife with a the heater that can be easily configured to the shaped of the knife and a heater that has a negligible weight which does not impede the normal operation of the knife.

Regarding claim 4, Joep teaches a die travel stop 22, 24 mounted to the die buildup plate 32 that limits travel of the trim press by engaging a feature 40, 38 on the striker plate when the trim press moves beyond the cutting position. See Figs. 1-5 in Joep.

Regarding claim 5, Joep teaches everything noted above including that the die travel stop includes a post element 22, 24 which is mounted on the die build up plate 32. The die build up plate limits travel of the trim press to no further than a position at which the cutting edge first contacts the striker plate. See Figs. 1-4 Joep.

8. Claims 6, 7, and 26, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Forthmann in view of Obara or Barrett and Brown, as applied to claim 1, and in further view of Davis, Jr. (3,802,308), hereinafter Davis and Giovannone et al. (5,795,535), hereinafter Giovannone. Regarding claims 6 and 26, Forthmann, as modified

Art Unit: 3724

above, teaches everything noted above including a die board 36 moveably mounted to the build up plate 40 that is movable within a range of positions along a first plane generally parallel to the sheet of thermoformable plastic and defined by the die build up plate 40 and wherein knife element 2, 3 is fixed to die board 36. See Fig. 1 and col. 4, lines 6-19 in Forthmann. Forthmann does not teach a die location pilot connected to the die board that engages a registration feature associated with the plastic article such that when the trim press is in registration feature co-act with the location pilot to move the die board relative to the die build up plate along the first plane such that the knife element is place in a predetermined cutting alignment with respect to the plastic article. However, Davis teaches a die location pilot 64 that is connected to a die board 60 and co-acts with a portion part of a plastic article 22 such that moves the die board relative to a die build up plate 44 such that a knife element 70 is place in a predetermined cutting alignment with respect to the plastic article 22. See Figs. 1-4 and col. 1, lines 14-63 in Davis. It would have been obvious to a person of ordinary skill in the art to provide Forthmann's die location pilot, as modified above, in order to hold the plastic article during the cutting operation and consequently produce clean cuts.

Regarding claim 26, Forthmann, as modified by above, does not teach that the die location pilot engages a registration feature on the sheet of thermoformable plastic that is associated with the plastic article and separated from the plastic article. However, Giovannone teaches a die location pilot connected to a die board. Giovannone also teaches that the die location pilot engages a registration feature on the sheet of thermoformable plastic that is associated with the plastic article and separated from the plastic article.

A die location pilot connected to a die board that engages a registration feature 27 on the thermoformable plastic 12. One of the plastic articles 27 is defined as a registration feature which is also associated with other plastic articles 27 and separated from them. The guides 40 which contacts the registration feature 27 on the sheet of thermoformable plastic 12 also define the die location pilot. See Fig. 5A in Giovannone. It would have been obvious to a person of ordinary skill in the art to provide Forthmann's trim press apparatus, as modified by above, with the registration of the die location pilot as taught by Givannone in order to trim multiple cuts in the plastic article and register the blades with the registrations features on the plastic article.

Regarding claim 7, Forthmann, as modified above, teaches everything noted above including that die location pilot 40 a post element that includes a generally conical recess that engages a protrusion 27 on the plastic sheet 12 to guide the knife element into the predetermined cutting position. See Fig. 5A-5B in Givoannone.

9. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Forthmann in view of Obara or Barrett, Brown, Davis, and Givoannone, as applied to claim 6, and in further view of Carll (2,313,801). Regarding claim 8, Forthmann, as modified above, teaches everything noted above except that the die board has a plurality of mounting holes that are oversized with respect to mounting posts on the die build up plate such that when the die board is mounted to the die build up plate the die board can slide on the die build up plate within the range defined by the oversized holes. Carll teaches a die board 16 (which is a segmented die board) having a plurality of mounting holes 26 that are oversized with respect to mounting posts on the die build up plate 50 such that when the die board 16 is mounted to

Art Unit: 3724

the die build up plate 50 and the die board 16 can slide on the die build up plate 50 within the range defined by the oversized holes 36. See Figs. 1-3 in Carll. It would have been obvious to a person of ordinary skill in the art to provide Forthmann's trim press apparatus, as modified above, with the oversized holes on the die board as taught by Carll or Whistler in order to adjust the knife element with respect to the die build up plate.

Response to Amendment

10. Applicant's arguments with respect to claims 1-8 and 26 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Zuhlke et al. (3,623,209), Carlson (3,605,477), Bilello (1,343,388), Nicholson (3,596,317), And Spano (4,730,761) teach a trim press apparatus.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ghassem Alie whose telephone number is (571) 272-4501. The examiner can normally be reached on Mon-Fri 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Allan Shoap can be reached on (571) 272-4514. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information

Art Unit: 3724

for unpublished applications is available through Private PAIR only. For more information about the PAIR system, SEE <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (too-free).

GA/ga

January 27, 2006



Allan N. Shoap
Supervisory Patent Examiner
Group 3700